

IN THE CLAIMS

1. (currently amended) A method for a host system to emulate execution of instructions, the instructions designed for execution by a target system, comprising the steps of:

emulating execution of the instructions by the host system at a host execution speed;

calculating a first quantity representative of a target execution speed at which the instructions are executable by said target system;

dynamically determining a variance between said first quantity and a second quantity representative of a ~~said~~ host execution speed at which said host system emulates execution of the instructions; and

based on said dynamically determined variance, dynamically adjusting said host execution speed by dynamically increasing said host execution speed when said variance indicates that said host execution speed is less than said target execution speed, and dynamically decreasing said host execution speed when said variance indicates that said host execution speed is greater than said target execution speed.

2. (canceled)

3. (canceled)

4. (previously presented) A method for simulating an operating speed of processing in an emulated target system corresponding to a rate of execution of instruction cycles on at least one host system, comprising the steps of

defining a benchmark sample by selecting a reference determined by an arbitrary time quantum of said speed;

multiplying said reference by said rate of execution of instruction cycles;

tracking said instruction cycles executed and determining whether a threshold value has been exceeded;

interrupting said processing when said threshold value has been exceeded;

determining an elapsed time period by querying a timing source which is associated with the host system and unaffected by said processing;

determining a timing reference by comparing said elapsed time with said time quantum; and,

using said timing reference to adjust said rate so as to simulate said operating speed of the target system.

5. (canceled)

6. (currently amended) The method of claim 1, wherein the step of dynamically adjusting the execution speed of said host system comprises the steps of:

pre-determining an acceptable variance between said host execution speed and said target execution speed, wherein said host execution speed is increased only when said host system is emulating execution of instructions more slowly than said target execution speed by more than said pre-determined acceptable variance, ~~—~~ and said host execution speed is decreased only when said host system is emulating execution of the instructions more rapidly than said target execution speed by more than said pre-determined acceptable variance.

7. (previously presented) The method of claim 1, wherein said variance is determined as a ratio between said first quantity and said second quantity.

8. (previously presented) The method of claim 1, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

9. (previously presented) The method of claim 8, wherein said host execution speed is dynamically adjusted for subsequent execution based on said variance determined for said particular block.

10. (currently amended) A machine-readable recording medium having information recorded thereon for performing a method for a host system to emulate execution of instructions, the instructions designed for execution by a target system, the method comprising the steps of:

emulating execution of the instructions by the host system at a host execution speed;

calculating a first quantity representative of a target execution speed at which the instructions are executable by said target system;

dynamically determining a variance between said first quantity and a second quantity representative of a ~~said host execution speed at which said host system emulates execution of the instructions;~~ and

based on said dynamically determined variance, dynamically adjusting said host execution speed by dynamically increasing said host execution speed when said variance indicates that said host execution speed is less than said target execution speed, and dynamically decreasing said host execution speed when said

variance indicates that said host execution speed is greater than said target execution speed.

11. (previously presented) The machine-readable medium of claim 10, wherein the step of dynamically adjusting the execution speed of said host system comprises the steps of:

pre-determining an acceptable variance between said host execution speed and said target execution speed, wherein said host execution speed is increased only when said host system is emulating execution of the instructions more slowly than said target execution speed by more than said pre-determined acceptable variance, and said host execution speed is decreased only when said host system is emulating execution of the instructions more rapidly than said target execution speed by more than said pre-determined acceptable variance.

12. (previously presented) The machine-readable medium of claim 11, wherein said variance is determined as a ratio between said first quantity and said second quantity.

13. (previously presented) The machine-readable medium of claim 10, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

14. (previously presented) The machine-readable medium of claim 13, wherein said host execution speed is dynamically adjusted for subsequent execution based on said variance determined for said particular block.

15. (currently amended) A host system operable to emulate execution of instructions designed for execution by a target system, said host system operable to dynamically determine a variance between a first calculated quantity representative of a target execution speed at which the instructions are executable by said target system and a second quantity representative of a host execution speed at which said host system emulates execution of the instructions, such that based on said dynamically determined variance, said host system is operable to dynamically adjust said host execution speed by dynamically increasing said host execution speed when said variance indicates that said host execution speed is less than said target execution speed, and by dynamically decreasing said host execution speed when said variances indicates that said host execution speed is greater than said target execution speed.

16. (previously presented) The host system of claim 15, wherein said host system is operable to dynamically adjust said host execution speed by pre-determining an acceptable variance between said host execution speed and said target execution speed, such that said host system is operable to increase said host execution speed only when said host system is emulating execution of the instructions more slowly than said target execution speed by more than said pre-determined acceptable variance, and said host system is operable to decrease said host execution speed only when said host system is emulating execution of the instructions more rapidly than said target execution speed by more than said pre-determined acceptable variance.

17. (previously presented) The host system of claim 16, wherein said variance is determined as a ratio between said first quantity and said second quantity.

18. (previously presented) The host system of claim 15, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

19. (previously presented) The host system of claim 18, wherein said host system is operable to dynamically adjust said host execution speed for subsequent execution based on said variance determined for said particular block.